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PATENT APPLICATION

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FOR LETTERS PATENTS FOR

BODY HARNESS FOR CARRYING A LONG GUN

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BODY HARNESS FOR CARRYING A LONG GUN

BACKGROUND

[0001] The present disclosure relates generally to the field of body harnesses and, more specifically, to a body harness for carrying a long gun such as a rifle or a shotgun.

[0002] By way of background, a variety of body harnesses for carrying a rifle or a shotgun have been constructed which include adjustable body or shoulder straps, and gun, rifle or shotgun receiving pouches. For example, U.S. Patent No. 5,927,574, entitled "Rifle and Shotgun Harness," discloses a body harness for use by a hunter in retaining his weapon. The body harness includes a belt positionable about a waist of the hunter, one shoulder strap and a pouch connected between the belt and the shoulder strap. Unfortunately, when a weapon is secured in the disclosed body harness, the weight associated with the weapon is concentrated on only one of the hunter's shoulders and is therefore not evenly distributed across the hunter's torso.

[0003] Another U.S. Patent No., 5,881,487, entitled Multi-Purpose, "Multi-Weapon Tactical Sling/Harness," discloses a sling having a chest strap attached to a shoulder harness. The shoulder harness is adapted to distribute weight somewhat evenly across both shoulders of the wearer. A snap shackle attached to a center piece between the shoulder straps of the shoulder harness provides an attachment point for the weapon. Although the sling/harness disclosed in this patent enables the weight associated with the weapon to be somewhat evenly distributed evenly across the wearer's body, the attached weapon is allowed to pivot about the snap shackle and is therefore not suitable for long guns.

[0004] A shoulder harness design disclosed in U.S. Patent No. 2,715,989, entitled "Shoulder Harness," discloses a body harness for carrying a weapon that addresses the weapon's weight distribution. The disclosed shoulder harness utilizes only binding straps and buckles to tightly bound the gun to the wearer. This may, however, damage the weapon's exterior surface. Further, the shoulder harness does provide for today's newer weapon designs, which may include a swivel hook anchor, or a sling swivel stud, for weapon attachment to a body harness.

[0005] Other slings, with an attachment to the butt portion of the rifle stock and an attachment to the barrel, or forward portion, of the weapon, are adapted to allow

manual adjustment of a single flexible strap of webbed material to yield several modes of weapon carry by a wearer of the sling. U.S. Patent No. 1,210,475 ('475) to Hooper , U.S. Patent No. 1,292,875 ('875) to Randall, U.S. Patent No. 3,595,451 ('451) to Branby , U.S. Patent No. 5,810,219 to Rosenfield ('219) and U.S. Patent No. 6,068,167 ('167) to Hopson, each disclose a variation of such a sling. The sling disclosed in the '451 patent differs from the '475 patent, the '875 patent and the '167 patent in that the sling disclosed in the '451 patent includes a keeper or lock member which must first be released before manually adjusting the sling. Moreover, buckles, guide arrangements and the like, in conjunction with the single flexible strap of webbed material, are configured in the '451 patent, the '475 patent, the '875 patent and the '167 patent to include an inner leg portion and a outer leg portion formed by a first loop of the webbed material. The outer leg portion of the '451, the '475, the '875 and the '167 patent further includes a middle leg and an outer leg formed by a second loop of the webbed material. During operation, as the middle leg is decreased in length via manual sliding of a buckle, a guide arrangement, or other similar element, the effective length of the sling is increased when resulting slack on the outer leg is equalized by the wearer, thereby becoming part of the length of the middle leg, and vice versa. Further, in addition to the single strap of webbed material and various clamps, the sling disclosed in the '219 patent includes a snap fastener to maintain a rapid fire sling configuration, and a rapid-release buckle to facilitate the rapid movement of the rifle from a backpack position to a firing position. Thus, the slings disclosed in the '451 patent, the '475 patent, the '875 patent and the '167 patent each require cumbersome adjustments by the wearer to equalize the middle and outer legs, while the sling design of the '219 patent emphasizes rapid removal of the rifle from the sling rather than carrying the rifle.

[0006] Additional features of the disclosure will become apparent to those skilled in the art upon consideration of the following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The detailed description particularly refers to the accompanying drawing figures in which:

[0008] FIGURE 1 is a plan view of a body harness for carrying a long gun, in accordance with an embodiment of the invention;

[0009] FIGURE 2 is a detail plan view of an attaching device for attaching the body harness to the long gun.

[00010] FIGURE 3 is a rear perspective view of a hunter wearing the body harness of FIG. 1 in a backpack position;

[00011] FIGURE 4 is a rear perspective view of a hunter wearing the body harness of FIG. 1 in a single shoulder position;

[00012] FIGURE 5 is a detail plan view of a buckle member of the body harness of FIG. 1; and

[00013] FIGURE 6 is a detail plan view of a buckle adjustment clip of the body harness of FIG. 1.

[00014]

DETAILED DESCRIPTION

[00015] While the present disclosure may be susceptible to embodiment in different forms, there is shown in the drawings, and will be described in detail, at least one embodiment with the understanding that the present description is to be considered an exemplification of the principles of the disclosure and is not intended to limit the disclosure to the details of construction and the arrangements of components set forth in the following description or illustrated in the drawings.

[00016] In general, a body harness for carrying a long gun is disclosed. The body harness includes a first strap and a second strap and may be worn in a backpack configuration or in a single shoulder configuration (*i.e.*, both straps on one shoulder). A first attaching device is coupled to the first end of the first strap to attach to the forward portion of the long gun. A second attaching device is coupled to the second end of the first strap to attach to the butt portion of the long gun. The body harness also includes a first buckle member slidably mounted to the first end of the first and second strap, and a second buckle member slidably mounted to the second end of the first and second strap, to adjustably couple the first strap to the second strap. Additional buckle members are also included to enable additional adjustments of the body harness as discussed below.

[00017] FIG. 1 is a plan view of a body harness 10 for carrying a long gun, in accordance with an embodiment of the invention. The body harness 10 is adapted for carrying the long gun such as a rifle or shotgun on either the back of the individual in a backpack position, or on one shoulder of the individual in a single shoulder position. The body harness 10 is preferably constructed using nylon, known for its weather durability and strength properties, however other durable materials such as leather or additional synthetic materials of similar strength, wear and flexibility qualities may be used.

[00018] The body harness 10 includes a first strap 12 and a second strap 14. As discussed below, each of the first and second straps 12, 14 include a number of strap segments of varying lengths, joined together using a combination of adjustable buckles and fixed connections. Although similar in design in their mid-region (*i.e.*, shoulder region of the individual wearer), the first and second straps 12, 14 differ in their end regions. The first strap 12 includes two attaching devices 16, 18 to attach a rifle to the body harness 10. The second strap 14 does not include attaching devices. The first attaching device 16 is coupled to the one end (*i.e.*, a first end) of the first strap 12 to attach the body harness 10 to the forward portion, or barrel, of the rifle stock. Similarly, the second attaching device 18 is coupled to the other end (*i.e.*, a second end) of the first strap 12 to attach the body harness 10 to the butt portion of the rifle stock. It is contemplated that the first attaching device 16 may be coupled to the butt portion of the rifle stock and the second attaching device 18 may be coupled to the forward portion of the rifle stock.

[00019] FIG. 2 discloses an exemplary attaching device 16 or 18 suitable for attaching the body harness 10 to the rifle. In the illustrated example, both of the first and second attaching devices 16, 18 preferably comprise a sling swivel having an aperture 22 extending therethrough and a mounting element 24. The aperture 22 is sized to receive a ring 26 affixed to the first strap 12. As a result, the sling swivel 16, 18 is able to pivot around the ring 26. The mounting element 24 is adapted to pivotally engage a sling swivel stud (not shown) mounted to either the forward portion or the butt portion of the rifle. A threaded element 28 or other similar structure fixes the sling swivel to the sling swivel stud. Thus, in one configuration, the sling swivel 16 is pivotally mounted to the sling swivel stud mounted to the forward portion of the rifle

stock, and the sling swivel 18 is pivotally mounted to the sling swivel stud mounted to the butt portion of the rifle stock, thereby resulting in the rifle being in a barrel-up position.

[00020] As previously discussed, the body harness 10 is adapted to carry the rifle on the back of the individual in a "backpack" position (*see*, FIG. 3). While in the backpack position, the body harness 10 can be adjusted via adjustable buckles (discussed below) so that the rifle is securely held approximately midway between the individual's shoulder blades. The rifle can be attached (via the first and second attaching devices 16, 18) to the body harness 10 so that the butt portion of the rifle can be located near the top of the individual's torso (barrel down). Alternatively, the rifle can be attached to the body harness 10 near the bottom of the individual's torso (barrel up), depending on the individual's preference. When in the backpack position, the body harness 10 enables the individual to securely carry the rifle, while at the same time, frees up the individual's arms and hands for climbing, removing brush, comfortable walking, etc. The backpack position also ensures that the weight of the rifle is more evenly distributed across the individual's body.

[00021] At other times, it is important that the individual quickly bring the rifle into a firing position. Accordingly, the body harness 10 is also adapted to carry the rifle behind one or the other shoulder of the individual in a "single shoulder" position (*see*, FIG. 4). While not as well suited as the backpack position for long treks, the single shoulder position enables the individual to carry the rifle and then quickly bring the rifle into the firing position.

[00022] Referring again to FIG. 1, the body harness 10 also includes a first buckle member 30 slidably mounted proximate to the first end of the first strap 12 and slidably mounted proximate to the first end of the second strap 14. Similarly, the body harness 10 also includes a second buckle member 34 slidably mounted proximate to the second end of the first strap 12 and slidably mounted proximate to the second end of the second strap 14.

[00023] For example, FIG. 5 is a detail plan view of an exemplary buckle member 30 suitable for use in the construction of the body harness 10. The buckle member 30 includes three attached parallel segments defining two slots. The two slots are sized to receive the first and second strap 12, 14. In the illustrated embodiment, a portion

of the first strap 12 and a portion of the second strap 14, together, are passed into the first slot, under the center segment 44 of the three parallel segments, and out of the second slot. The mounted buckle member 30 can then be slidably positioned up or down along the first and second strap 12, 14.

[00024] Referring again to FIG. 1, the first buckle member 30 adjustably couples the first strap 12 to the second strap 14 at a first location 32 of the body harness. The second buckle member 34 adjustably couples the first strap 12 to the second strap 14 at a second location 36 of the body harness 10. Accordingly, the first strap extending between the first location 32 and the second location 36 forms a first body harness portion 38, and the second strap 14 extending between the first location 32 and second location 36 forms a second body harness portion 40. Thus, the length of the first and second body harness portions 38, 40 can be adjusted via sliding the first and second buckle member 30, 34, yielding the body harness 10 that can be sized to fit substantially all body types.

[00025] When in the backpack position, the first body harness portion 38 and the second body harness portion 40 are adapted to pass substantially simultaneously over the first and second shoulders of the individual, respectively. When worn in the backpack position, the first buckle member 30 is positioned behind the neck of the individual and the second buckle member 32 is positioned proximate to the lower back area. When in the single shoulder position, the first body harness portion 38 and the second body harness portion 40 are adapted to be arranged in a superimposed relationship for passing over a single shoulder of an individual. When worn in the single shoulder position, the first buckle member 30 is positioned proximate to the top of the shoulder and the second buckle member 32 is positioned proximate to the hip area.

[00026] Third and fourth buckle members 48, 50 are also included on the first strap 12 to enable the distance between the first and second attachment devices 16, 18 to be adjusted. The third buckle member 48 is slidably mounted to the first strap 12 at a first end and supports formation of a first adjustable loop 49 by folding an end portion (*i.e.*, a first end portion) of the first strap 12 upon itself and passing the folded end portion through the slots of the third buckle member 48. The ring 26, captured by the first adjustable loop 49, provides the mounting point for pivotally attaching the first

attaching device 16 via the aperture 22 (sized to receive a ring 26) to the first strap 12. Likewise, the fourth buckle member 50 is slidably mounted to the first strap 12 at a second end and supports formation of a second adjustable loop 51 by folding an opposite end portion (*i.e.*, a second end portion) of the first strap 12 upon itself and passing the folded end portion through the slots of the fourth buckle member 50. A separate ring 26, captured by the second adjustable loop 51, provides the mounting point for pivotally attaching the second attaching device 18 to the second strap 12.

[00027] The first and second straps 12, 14 may be further segmented to enable additional adjustments. For example, in the illustrated embodiment of FIG. 1, the first strap 12 includes a first segment 52, a second segment 54, a third segment 56, and a fourth segment 58. The first segment 52 includes the first loop 49 and the third buckle member 48, and passes through the first buckle member 30 at the first location 32. The second segment 54 is fixedly fastened by, for example, stitching, to the first segment 52 at an end opposite to the first loop 49. The second segment 54 is preferably constructed to include a cushioned pad with a non-slip surface. The non-slip surface may be one of any number of suitable non-slip materials such as, for example, a velour material, and is adapted to engage the surface of the individual when the body harness 10 is positioned on the individual. The cushioned pad is adapted to enhance the comfort of the individual when the body harness 10 is positioned on the individual. The third segment 56 is fixedly fastened to the opposite end of the second segment 54, and the fourth segment 58 is adjustably coupled to the end of the third segment 56 via a first buckle adjustment clip 60 sized to receive the third and fourth segments 56, 58 of the first strap. The fourth segment 58 includes the second loop 51 and the fourth buckle member 50, and passes through the second buckle member 34 at the second location 36.

[00028] FIG. 6 illustrates a detail plan view of an exemplary buckle adjustment clip 60 adjustably coupling the third segment 56 to the fourth segment 58. The buckle adjustment clip 60 includes four attached parallel segments defining three slots. As shown, the third segment 56 forms a loop around one end segment of the buckle adjustment clip 60 and is stitched to the second segment 54. An end portion of the fourth segment 58 is passed up through a center slot 72, over a middle segment 74, and down through an end slot 76. The end portion of the fourth segment 58 is

therefore folded upon itself and adjustment of the length of the fourth segment 58 is accomplished via movement of the first buckle adjustment clip 60 along the length of the fourth segment 54.

[00029] Referring again to FIG. 1, the second strap 14 includes a first segment 62, a second segment 64, a third segment 66, and a fourth segment 68. Unlike the first segment 52 of the first strap 12, the first segment 62 does not include a loop or a buckle member, but it does pass through the first buckle member 30 at the first location 32. The second segment 64 is fixedly fastened to the first segment 62 at an opposite end. The second segment 64 is also preferably constructed to include cushioned pad material with a non-slip surface. The third segment 66 is fixedly fastened to the opposite end of the second segment 64, and the fourth segment 68 is adjustably coupled to the other end of the third segment 66 via a second buckle adjustment clip 70. Unlike the first segment 52 of the first strap 12, the fourth segment 68 does not include a loop or a buckle member, but it does pass through the second buckle member 34 at the second location 36.

[00030] As previously described, in addition to the backpack configuration, the body harness may be worn in single shoulder configuration. In the single shoulder configuration, the second segment 54 of the first strap 12 and the second segment 64 of the second strap 14 are overlaid so that there is a double layer of cushion material extending over the individual's shoulder. To facilitate ease of overlaying, the second segment 54 of the first strap 12 is preferably slightly shorter than the second segment 64 of the second strap 14, for example three-eighths inch shorter. In addition, to facilitate ease of overlaying, the cushioned pad is vertically stitched to promote nesting of the second segments 54 and 64 while overlaid in the single shoulder position.

[00031] As may be apparent from the above disclosure, the body harness 10 enables an individual to carry a long gun such as a rifle in either a comfortable, adjustable backpack position where the weight of the rifle is evenly distributed across the individual's back and both shoulders, or in a single shoulder position where the rifle can be quickly brought into a firing position.

[00032] While an embodiment of the present invention is shown and described, it is envisioned that those skilled in the art may devise various modifications and

equivalents without departing from the spirit and scope of the invention as recited in the following claims.